Correspondence

Envisions and pitfalls in suitable environments for people with dementia

Technology on behalf of persons with dementia is one of the most issued topics in 'Gerontechnology'. Even the assessment of technology effectiveness in such caring process has been molded by technology itself[1]. No wonder therefore that the first Grandmaster, Jim Fozard, had such target in mind, as successfully shown in the overview by van der Plaats[2], who joined Fozard with Luria. The latter author conceived the hierarchical organisation of our brain in higher versus lower anatomical and functional levels. The former author transposed such neurological view into his transactional concept of gerontechnology. In her paper, Johanna van der Plaats hit the target listing the information processing patterns occurring in the brains of persons with dementia, as well as underscoring aspects which differentiate demented from children behaviours. Stemming from Fozard's person-environment system, she struck home also illustrating valuable examples of suitable environmental solution, most of which have been dealt with in 'Gerontechnology' papers, since earliest issues of the journal[3].

General principles and consequent care steps as from Luria's and Fozard's vision, through van der Plaats' overview, are in line with GentleCare principles, by Moyra Jones[4]. Such a prosthetic approach posits the environment as one of its foundations. "The prosthetic model for dementia identifies deficits in function in the patient and builds a 'prosthesis of care' for each individual that is intended to compensate for the lost function(s). The main goal of the prosthesis is not to regain cognition or function, but to deal with the well-being of the person to achieve the best status in absence of distress and pain. To potentially help brain function, a complex prosthesis is needed, made up of three basic elements: the individuals with whom the person with dementia interacts, the physical space in which the person lives, and the programs and activities in which the person engages"[5]. The implementation of GentleCare allowed our special care unit to achieve improvements in behavioural and psychotic symptoms of dementia (BPSD) that followed specific as well as plausible trajectories[6], or clinically relevant functional gains in demented patients complaining both for femur fracture and BPSD[7].

We share many tools, like the use of baby dolls[8] or of old pieces of technology - true pieces, not just old fashioned[9]; we rely also on virtual reality, yet without the belief that "for people with dementia the ***only*** option to influence behaviour is through virtual reality"[2]. More, even best grounded technological solutions – far from "stupid technology / stupid intelligence"[10] - may turn out in drawback. Others, such as the motion sensitive light did not prove to be effective in real life situations, because they caused too much confusion for the person with dementia and thus were not useful. As the light turned on automatically, people with diminished memory capabilities were unable to remember that the light would switch off automatically when they stopped moving. This caused unnecessary anxiety and aggravation[11]. Notwithstanding similar warnings, indeed "the neuroscientific way of thinking supports practical technology and design"[2]. Everyone who is involved in care for persons with dementia must keep in mind that "our most important goal is well-being[2]", thanking Luria and Fozard for their envision and van der Plaats for having reminded us.

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ISG BUSINESS

ISG*ISARC2012 well underway

In total 1388 visits were paid to www.isg-isarc2012.org in the months April and May 2011, indicating the emerging interest in the 2012 conference. These visits came from 50 different countries and all continents, except Antarctica. Although the website has only be in the air for a view months[1], already 29% of the visits came from dedicated searches with search engines, usually Google. Another 11% were directed to the conference site from referring sites, e.g. sites of our sponsors.

The conference is managed with the Open Conference System developed in the Canadian Public Knowledge Project. This will allow all interested parties to register as free readers, for newsfeeds, submission of contributions, and applications for different functions, such as peer reviewer, master teacher for the master classes, or 'simple' participant. In fact, among the 370 registered readers, 113 have been accredited as reviewer and member of the international scientific committee.

The conference will have **Keynotes** and a **GeronTechnoPlatform**, both giving an overview of the total scope of 'Who is afraid of aging?'. Keynotes are on invitation only, but submit to the GeronTechnoPlatform if you want to demonstrate a well-tested product or service.

'**Gerontechnology Art**' is another overview event, directed by Jacqueline Hillen, Artistic Collective, Nice, France. It will present an artistic impression of contemporary living indoors and outdoors with some future and past flavor.

In addition to these overview activities, specialized tracks have been defined with each a track director who oversees the peer-reviewing process. ISG tracks are chosen according to the application domains[2]. Those of our partner IAARC[1] are the traditional ones from previous ISARC events.

Gerontechnology tracks
The track '**Communication & Governance**' is headed by Professor Patricia Wright PhD of Cardiff University (UK). Since a person cannot be complete without communication, and good governance is needed to have a pleasant, affordable, and safe life, it is an important application domain of gerontechnology. Topics in this track include: care innovation, cognitive aging, diffusion and adoption, ethics, business re-engineering, embedded systems, anti-loneliness, interaction design, or technology acceptance.

Dr. Heidrun Mollenkopf of BAGSO eV, Germany, serves as track director for '**Mobility & Transport**'. Mobility, the ability to walk larger distances with ease and pleasure, is one of the first restrictions in aging in developed countries. It leads to reduced workability, less exercise, shrinking of the circle of close contacts, and loss of connectivity to society. Transport facilities are commonly not suitable. Topics in this track include: biomechanics, embedded systems, inclusive design, indoor and outdoor mobility, and navigation.

The '**Health & Self-Esteem**' tracks falls under the guidance of dr Helanthe S.M. Kort of Utrecht University of Applied Sciences, the Netherlands. In general, the last 3 months of life bear the highest societal cost, no matter at which age one dies. But how can we keep autonomy and quality of life high also in these three last month? And while we are at it, why not aiming at enjoyment in the total life span? The track include topics such as anti-loneliness, biorobotics, care, cognition, training, rehabilitation, embedded systems, falls, gaming, robotics, lifestyle, interaction design, rights & empowerment.

Professor William D. Kearns PhD, University of South Florida, USA, takes the lead in

the track '**Housing & Daily Living'**. Dwelling functions are increasing. In addition to protection and social life, we added telework, as well as support of daily activities, and care and cure in relation to health. It all calls for a different view on housing and built environments. Topics include: aging-in-place, Ambient Assisted Living (AAL), home automation, inclusive design, indoor mobility, interaction design, service robotics, technology acceptance, and teleservices.

The increasingly important application area of '**Work & Leisure**' is headed by Bo Xie PhD, University of Maryland, USA. "Work longer = Live longer" concluded the OECD (Organisation for Economic Co-operation and Development) in 2006. And how about hobby and leisure activities? Topics in this track include: ambient assists, working spaces, business process re-engineering, construction robotics, fun & leisure, gaming, work procedures, human-robot cooperation, intergenerational relationships, and successive careers.

ISARC tracks

Professor Quang Ha PhD, Sydney University of Technology, Australia, will head the track '**Automation**'. Why not automate routine activities? With the right algorithms, enough security and safety, productivity should go up. Shouldn't it? This track is devoted to the real effects of automation and how to optimize. It includes topics such as automated data acquisition and monitoring, construction planning, scheduling, maintenance and inspection, and healthy indoor air at less energy cost.

The track '**Information Technology**' is guided by Professor Carlos Caldas PhD of the University of Texas, USA. Nowadays, preparing information from data and handling it for useful purposes is one of the fastest developing technology branches. This track focuses on the technologies for design, construction management, maintenance and smart textiles. Topics include: embedded systems, IT in construction management, design automation and virtual construction, sensing technology, risk reduction, smart clothing, and smart footwear.

'**Management & Social Issues**' is directed by Professor Carl T. Haas PE PhD, University of Waterloo, Canada. Technology is never on its own. It has ethical, economical, usability and a number of social aspects that should be taken into account at design, implementation, adoption, diffusion and use. In this track we will limit ourselves to the issues that are related to the AEC (Architecture, Engineering, Construction) industry in an aging society, including business re-engineering, human-robot cooperation, design meetings, lean management, or problem solving in construction.

'**Realities or Application Systems'** is the responsibility of Professor Jochen Teizer PhD, Georgia Institute of Technology, USA. Current 4-D virtual technologies (including a time factor) are just beginning to change our world. They allow for virtual building, virtual realities, augmented realities, and 'quite real' simulations. This tract is devoted to the options of these technologies for the AEC industry and our aging society.

Professor Tatsuo Arai PhD, Osaka University, Japan, serves as track director for '**Robotics**'. The robot, the device that senses, concludes, intervenes, senses and concludes again, is penetrating all corners of modern life. In this conference its applications to the aging society and in the AEC industry is treated. Topics include: ethics, field robotics, history of robotics, human-robot cooperation, robotics in building construction and civil engineering, robotic support for the older construction worker, and service robotics.

Call for abstracts

Topics have been added to each track to inform potential contributors on its possible content. Authors will select a track to submit to, and track directors will add the topic keyword to each contribution. The reader may have noticed that some topics appear in more than one track. Depending on the number of contributions received the track structure may differ in the final program.

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Dutch-Flemish Chapter in 2010
The Dutch Flemish chapter of ISG has 37 members. In 2010 a meeting was organized in preparation of the ISG conference in Vancouver. In addition, activities were executed for the arrangement of the Holland Booth from the Netherlands Consulate General in New York under supervision of Arjan Braamskamp, the Economic Officer. The members of the Dutch Flemish chapter were invited by the Dutch consul in Vancouver for a dinner to celebrate the acceptance of the Dutch bid to organize the next ISG conference in 2012. The chapter also organized the 6th Master Class for young scientists.
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Student comments on the 6th Master class
The 6th ISG master class was held in Eindhoven, November 9-10, 2010. At the end the students were invited to complete an evaluation form. Most of them indicated that presentation of the posters, feedback and discussion with the masters and with other students had been quite helpful to better focus and define the subjects of research or design. In general the assignments to place your own project in the cross-fertilization matrix, the impact and life domain matrix and the age and generation matrix had helped to understand their project in gerontechnology terms, and to get a more clear idea on how to continue. Subsequently, the assignment to rewrite the title of your own project in seven words helped most. Some suggestions for improvement were also given: (i) more guidance in structuring the posters (for instance, problem – theory – method – results – conclusions), (ii) having all poster presentations on the first day to benefit more from the matrices discussions that can then be shorter, (iii) more time for discussion, (iv) more time to discuss each poster, (v) more input from technology (both current masters and students come mainly from gerontology), (vi) more information on how to get your work published in international peer-reviewed journals, and (vii) teaching more knowledge on general gerontechnology.
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Francophone Chapter (under construction) in 2010
Discussions within the ISG Francophone chapter concerned the preparation for the 2012 World Conference, Master classes, partnerships between universities and research labs in France and Quebec (Canada). Since SFTAG, the French Gerontechnology Society, is closely related to the Francophone chapter, some of its activities are also relevant to our cultural chapter, such as the Francophone-Japanese annual conference on robotics at Toulouse University, and participation in Think Tanks set up by the French Ministry of Industry for ICT innovation and health care economic models, usability assessment, and living lab methodology for inclusive design.
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Professional news

FICCDAT 2011
FICCDAT (www.ficcdat.ca) happens every four years. The 2011 version features six conferences on caregiving, disability, aging and technology. On June 5-8, 2011 this event will take place at the Sheraton Centre Toronto Hotel, Toronto, Ontario, Canada. Delegates are from government, private sector, academia, consumer and professional organizations who will continue the global dialogue concerned with helping the world's aging populations live longer and better. These conferences include: (i) Caregiving in the 21st Century Conference, (ii) Advances in Neurorehabilitation Conference, (iii) International Conference on Best Practices in Universal Design, (iv) RESNA / 3rd International Conference on Technology and Aging, (v) Growing Older With A Disability Conference, and (vi) 34th Canadian Medical and Biological Engineering Conference. After paying a little extra fee, you may also visit the International Conference on Stairway Usability and Safety (ICSUS).

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